

1 Amendment to the Claims

2 In the Claims:

3 Please amend Claims 1, 13, 14, 21, 35, and 42 as follows:

4 1. (Currently Amended) A method for determining one or more performance metrics for a
5 distributed application in which distributed application data are transferred from a first site to a
6 second site over a network, comprising the steps of:

7 (a) enabling a user to transmit a request for the distributed application data desired
8 by the user, said request being transmitted from the second site to the first site over the network;

9 (b) in response to the request, transmitting the distributed application data from the
10 first site to the second site over the network, if the distributed application data are not already
11 accessible at the second site;

12 (c) ~~including~~ appending machine instructions that define a performance
13 monitoring function ~~with~~ to the distributed application data that were requested and transmitted over
14 the network to the second site as one data file; and

15 (d) executing the machine instructions at the second site, to implement the
16 performance monitoring function and to determine the one or more performance metrics for the
17 distributed application without using the performance monitoring function to request any distributed
18 application data from any ~~other~~ site, at least one performance metric being determined in connection
19 with timing of events occurring during the transmission of the distributed application data to the
20 second site.

21 2. (Original) The method of Claim 1, wherein the performance monitoring function at the
22 second site is initiated after the distributed application data are accessed at the second site.

23 3. (Original) The method of Claim 1, further comprising the step of collecting the one or
24 more performance metrics for the distributed application over the network.

25 4. (Previously Presented) The method of Claim 3, wherein the step of collecting the
26 performance metrics includes the step of applying a probabilistic sampling parameter to determine
27 whether performance metrics are collected from each of a plurality of sites.

28 5. (Original) The method of Claim 4, wherein the probabilistic sampling parameter is applied
29 on a per-site basis.

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1 6. (Original) The method of Claim 4, wherein the probabilistic sampling parameter is applied
2 on a per-request basis.

3 7. (Original) The method of Claim 1, wherein the performance monitoring function at the
4 second site determines one or more of:

5 (a) a fetch latency, corresponding to a time period required to fetch the distributed
6 application data from the first site over the network;

7 (b) a render latency, corresponding to a time period required to fetch and display
8 the distributed application data at the second site;

9 (c) a dwell latency, corresponding to a time period exhibited by a user requesting
10 the distributed application data, before requesting other distributed application data;

11 (d) a per-image fetch latency, corresponding to a time period for fetching a
12 specific image referenced in the distributed application data;

13 (e) an image arrival time, corresponding to a time at which a specific image,
14 loaded as a part of accessing the distribution application data, arrives at the second site;

15 (f) a navigation status, corresponding to an event that brought a user to the
16 distributed application data;

17 (g) a cache status, corresponding to a determination of whether the distributed
18 application data was cached at the second site;

19 (h) a window resize event, corresponding to a determination of whether the user
20 resized a window in which the distributed application data are accessed;

21 (i) a page stop event, corresponding to a determination of whether the user
22 aborted loading the distributed application data;

23 (j) an image error event, corresponding to a determination of whether an error
24 occurred while loading an image referenced in the distributed application data; and

25 (k) a JavaScript error event, corresponding to a determination of whether an error
26 occurred during interpretation of JavaScript included in the distributed application data.

27 8. (Original) The method of Claim 3, further comprising the step of determining whether to
28 collect a performance metric from the second site as a function of a specific performance metric that
29 was determined at the second site.

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1 9. (Original) The method of Claim 1, further comprising the step of determining whether the
2 distributed application data are already cached at the second site or must be transferred from the first
3 site, before determining a performance metric.

4 10. (Original) The method of Claim 1, wherein the distributed application data have a
5 markup language format.

6 11. (Original) The method of Claim 1, further comprising the steps of determining a
7 performance metric at the first site; and combining the performance metric determined at the second
8 site with a performance metric determined at the first site to determine a correlated performance
9 metric.

10 12. (Previously Presented) The method of Claim 1, wherein said one or more performance
11 metrics is determined without any apparent effect on the access of the distributed application data at
12 the second site.

13 13. (Currently Amended) A machine-readable medium on which are stored machine
14 instructions for ~~inclusion with~~ appending to distributed application data that are transferred from one
15 site to another as one data file, said machine instructions causing:

16 (a) a performance monitoring function to be implemented when the distributed
17 application data and the machine instructions comprising the one data file are accessed; and

18 (b) the performance monitoring function to determine one or more performance
19 metrics for a distributed application in which the distributed application data are transferred between
20 sites and accessed at one of the sites, without using the performance monitoring function to request
21 any distributed application data from any ~~other~~ site, at least one performance metric being determined
22 in connection with timing of events occurring during the transmission of the distributed application
23 data to the site receiving the distributed application data.

24 14. (Previously Presented) A system for determining one or more performance metrics for a
25 distributed application in which distributed application data are transferred from a first site to a
26 second site over a network, comprising:

- 27 (a) a memory;
28 (b) a display;
29 (c) a network interface; and

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1 (d) a processing device that is coupled to the memory, the display, and the network
2 interface, said network interface being adapted to enable communication over the network, wherein at
3 the second site, the processing device causes a request for the distributed application data to be
4 transmitted over the network through the network interface to the first site, said processing device at
5 the first site responding by transmitting the distributed application data ~~along~~ appended with machine
6 instructions as one data file that cause the processing device at the second site to perform a
7 performance monitoring function when executed by said processing device as the distributed
8 application data are accessed at the second site, said performance monitoring function determining
9 said at least one performance metric and being implemented without requiring any affirmative action
10 by a user of the processing device and without using the performance monitoring function to request
11 any distributed application data from any other site.

12 15. (Original) The system of Claim 14, wherein the machine instructions cause the
13 processing device at the second site to transmit said at least one performance metric over the network
14 to a data center serving as a collection site for performance metrics.

15 16. (Original) The system of Claim 15, wherein a probabilistic sampling parameter is applied
16 to determine whether the performance metric is collected at the data center.

17 17. (Original) The system of Claim 16, wherein the probabilistic sampling parameter is
18 applied on a per-site basis.

19 18. (Original) The system of Claim 16, wherein the probabilistic sampling parameter is
20 applied on a per-request basis.

21 19. (Original) The system of Claim 14, wherein the machine instructions executed by the
22 processing device at the second site cause a determination of one or more of:

23 (a) a fetch latency, corresponding to a time period required to fetch the distributed
24 application data from the first site over the network;

25 (b) a render latency, corresponding to a time period required to fetch and render all
26 contents of the distributed application data on the display at the second site;

27 (c) a dwell latency, corresponding to a time period exhibited by a user requesting
28 the distributed application data, before requesting other distributed application data;

29 (d) a per-image fetch latency, corresponding to a time period for fetching a
30 specific image referenced in the distributed application data;

1 (e) an image arrival time, corresponding to a time at which a specific image,
2 loaded as a part of accessing the distribution application data, arrives at the second site;

3 (f) a navigation status, corresponding to an event that brought a user to the
4 distributed application data;

5 (g) a cache status, corresponding to a determination of whether the distributed
6 application data was already cached in the memory at the second site;

7 (h) a window resize event, corresponding to a determination of whether the user
8 resized a window in which the distributed application data accessed are rendered on the display at the
9 second site;

10 (i) a page stop event, corresponding to a determination of whether the user
11 aborted loading the distributed application data from the first site;

12 (j) an image error event, corresponding to a determination of whether an error
13 occurred while loading an image referenced in the distributed application data; and

14 (k) a JavaScript error event, corresponding to a determination of whether an error
15 occurred during interpretation of JavaScript included in the distributed application data.

16 20. (Original) The system of Claim 14, wherein the machine instructions cause the
17 processing device at the second site to determine whether the distributed application data are cached
18 at the second site or must be transferred from the first site, before determining said one or more
19 performance metrics.

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1 21. (Currently Amended) A method for determining and collecting at least one performance
2 metric related to access of a Web page by a browser program on a client device, including at least one
3 of a compound performance metric and a correlated performance for a network, comprising the steps
4 of:

5 (a) enabling a user to request transfer of the Web page from a server device to the
6 client device over a network;

7 (b) ~~including~~ appending machine instructions ~~with~~ to the Web page ~~when~~ so that
8 the Web page is and machine instructions are transferred to the client device as one data file;

9 (c) when the Web page is loaded by the client device for rendering by the browser
10 program, causing the client device to execute the machine instructions to carryout a browser
11 monitoring function, said browser monitoring function being implemented without requiring any
12 affirmative action by a user of the client device;

13 (d) determining said at least one performance metric on the client device with the
14 browser monitoring function without using the browser monitoring function to request any Web page
15 from any ~~other~~ site, at least one performance metric being determined in connection with timing of
16 events occurring during the transmission of the distributed application data to the client device; and

17 (e) if a correlated performance metric is to be determined:

18 (i) determining a server performance metric; and

19 (ii) combining the server performance metric with said at least one
20 performance metric to determine the correlated performance metric.

21 22. (Original) The method of Claim 21, further comprising the step of transmitting said at
22 least one performance metric from the client device to a remote site over the network.

23 23. (Original) The method of Claim 22, wherein the remote site comprises a data center,
24 further comprising the step of analyzing said at least one performance metric to determine
25 performance data for the Web page, including the correlated performance metric.

26 24. (Previously Presented) The method of Claim 23, further comprising the step of enabling
27 a determination to be made of whether said at least one performance metric will be accepted for
28 processing by the data center, based upon a probabilistic sampling parameter.

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1 25. (Original) The method of Claim 24, wherein the probabilistic sampling parameter is
2 applied on a per-user basis to determine if said at least one performance metric will be accepted by
3 the data center.

4 26. (Original) The method of Claim 24, wherein the probabilistic sampling parameter is
5 applied on a per-Web page basis to determine if said at least one performance metric will be accepted
6 by the data center.

7 27. (Previously Presented) The method of Claim 23, wherein a plurality of different kinds of
8 performance metrics can be determined by the browser monitoring function, further comprising the
9 step of enabling the data center to selectively accept a performance metric as a function of the kind of
10 performance metric being transmitted to the data center.

11 28. (Original) The method of Claim 21, wherein the step of determining said at least one
12 performance metric is done without the client device providing any indication to the user of the client
13 device that said at least one performance metric is being determined.

14 29. (Original) The method of Claim 21, wherein when determining said at least one
15 performance metric, the client device determines one or more of:

16 (a) a fetch latency, corresponding to a time period required to fetch a base Web
17 page document from a server over the network;

18 (b) a render latency, corresponding to a time period required to fetch and display
19 all contents referenced within an Hypertext Markup Language (HTML) document on the client
20 device;

21 (c) a dwell latency, corresponding to a time period exhibited by the user viewing
22 the Web page, before navigating to a different Web page with the browser program;

23 (d) a per-image fetch latency, corresponding to a time period for fetching a
24 specific image referenced in the Web page;

25 (e) an image arrival time, corresponding to a time at which a specific image,
26 loaded as a part of rendering the Web page, arrives on the browser;

27 (f) a navigation status, corresponding to an event that brought the user to the Web
28 page;

29 (g) a cache status, corresponding to a determination of whether the Web page was
30 cached by the browser program or by a proxy;

1 (h) a window resize event, corresponding to a determination of whether the user
2 resized a window in which the Web page is rendered;

3 (i) a page stop event, corresponding to a determination of whether the user
4 aborted loading of the Web page;

5 (j) an image error event, corresponding to a determination of whether an error
6 occurred while loading an image included in the Web page; and

7 (k) a JavaScript error event, corresponding to a determination of whether an error
8 occurred during interpretation of JavaScript included in the Web page.

9 30. (Original) The method of Claim 21, further comprising the step of determining whether
10 the Web page was previously cached by the client device.

11 31. (Original) The method of Claim 21, wherein said at least one performance metric
12 comprises a performance metric for each image included in the Web page.

13 32. (Original) The method of Claim 21, further comprising the steps of:

14 (a) including a monitor cookie with the Web page that is transferred to the client
15 device from the server device and indicates that the Web page is a monitored document;

16 (b) detecting the monitor cookie when the Web page is transferred to the client
17 device; and

18 (c) causing the browser monitor function to determine that said at least one
19 performance metric is to be determined for the Web page in response to the monitor cookie being
20 detected.

21 33. (Original) The method of Claim 21, further comprising the steps of:

22 (a) executing a server monitoring function on a server device that is transferring
23 the Web page to the client device;

24 (b) determining the server performance metric related to the transfer of the Web
25 page to the client device from the server device with the server monitoring function; and

26 (c) transmitting said server performance metric to a remote site for combination
27 with said at least one performance metric determined by the browser monitoring function on the
28 client device, to determine the correlated performance of the network.

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1 34. (Original) The method of Claim 21, wherein the step of combining said at least one
2 performance metric determined by the browser monitoring function with the server performance
3 metric determined by the server monitoring function determine a network latency.

4 35. (Currently Amended) A memory medium on which are stored machine readable
5 instructions, which when executed by a client computing device, cause the client computing device to
6 carryout a browser monitoring function, said browser monitoring function being implemented
7 without requiring any affirmative action by a user of the client computing device and being used for
8 determining at least one performance metric on the client computing device with the browser
9 monitoring function, said at least one performance metric being related to access of a Web page by a
10 browser program executed on the client computing device and enabling at least one of a compound
11 performance metric and a correlated performance metric, to be neither the compound performance
12 metric nor the correlated performance metric being determined ~~without~~ using the browser monitoring
13 function to request any Web page from any other site.

14 36. (Original) The memory medium of Claim 35, wherein the machine readable instructions
15 cause said at least one performance metric to be transmitted to a remote site over a network for
16 determination of the correlated performance metric.

17 37. (Original) The memory medium of Claim 35, wherein said at least one performance
18 metric is determined without the client device providing any indication to a user of the client device
19 that said at least one performance metric is being determined.

20 38. (Original) The memory medium of Claim 35, wherein the machine readable instructions
21 determine one or more of the following performance metrics:

22 (a) a fetch latency, corresponding to a time period required to fetch a base Web
23 page document from a server over the network;

24 (b) a render latency, corresponding to a time period required to fetch and display
25 all contents referenced within an HTML document on the client device;

26 (c) a dwell latency, corresponding to a time period exhibited by the user viewing
27 the Web page, before navigating to a different Web page with the browser program;

28 (d) a per-image fetch latency, corresponding to a time period for fetching a
29 specific image referenced in the Web page;

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1 (e) an image arrival time, corresponding to a time at which a specific image,
2 loaded as a part of rendering the Web page, arrives on the browser;

3 (f) a navigation status, corresponding to an event that brought the user to the Web
4 page;

5 (g) a cache status, corresponding to a determination of whether the Web page was
6 cached by the browser program or by a proxy;

7 (h) a window resize event, corresponding to a determination of whether the user
8 resized a window in which the Web page is rendered;

9 (i) a page stop event, corresponding to a determination of whether the user
10 aborted loading of the Web page;

11 (j) an image error event, corresponding to a determination of whether an error
12 occurred while loading an image included in the Web page; and

13 (k) a JavaScript error event, corresponding to a determination of whether an error
14 occurred during interpretation of JavaScript included in the Web page.

15 39. (Original) The memory medium of Claim 35, wherein the machine readable instructions
16 cause the client computing device to determine whether the Web page was previously cached by the
17 client computing device.

18 40. (Original) The memory medium of Claim 35, wherein said at least one performance
19 metric includes a performance metric for each image in the Web page.

20 41. (Original) The memory medium of Claim 35, wherein the machine readable instructions
21 cause the client computing device to:

22 (a) detect whether a monitor cookie is included with the Web page that is
23 transferred to the client computing device, said monitor cookie indicating that the Web page is a
24 monitored document; and

25 (b) cause the browser monitor function to determine that said at least one
26 performance metric is to be determined for the Web page in response to the monitor cookie being
27 detected.

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1 42. (Currently Amended) A system for determining and collecting at least one performance
2 metric related to access of a Web page by a browser program, comprising:

3 (a) a memory;
4 (b) a display;
5 (c) a network interface; and
6 (d) a processing device that is coupled to the memory, the display, and the network
7 interface, said network interface being adapted to couple to a remote storage at a server to retrieve the
8 Web page, said Web page including machine instructions that perform a browser monitoring function
9 and which are executed by the processing device when the Web page is loaded by the processing
10 device for rendering in the display, said browser monitoring function determining said at least one
11 performance metric and being implemented without requiring any affirmative action by a user of the
12 processing device and without using the browser monitoring function to request any ~~Web page~~
13 further download from any ~~other~~ site, said at least one performance metric including at least one of
14 compound performance metric and a correlated performance metric.

15 43. (Original) The system of Claim 42, wherein the machine instructions further cause the
16 processing device to transmit said at least one performance metric from the processing device to a
17 remote site over a network through the network interface.

18 44. (Original) The system of Claim 43, further comprising a computing device disposed
19 remotely at a data center, said computing device receiving and analyzing said at least one
20 performance metric to determine performance data for the Web page, said performance data
21 including the correlated performance metric for the network.

22 45. (Original) The system of Claim 44, wherein a determination of whether said at least one
23 performance metric will be accepted for processing by the data center is based upon a probabilistic
24 sampling parameter, ensuring that performance metrics transmitted to the data center are randomly
25 sampled.

26 46. (Original) The system of Claim 45, wherein the probabilistic sampling parameter is
27 applied on a per-user basis to determine if said at least one performance metric is accepted for
28 processing by the data center.

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1 47. (Original) The system of Claim 45, wherein the probabilistic sampling parameter is
2 applied on a per-Web page basis to determine if said at least one performance metric will be accepted
3 for processing by the data center.

4 48. (Original) The system of Claim 44, wherein a plurality of different kinds of performance
5 metrics can be determined by the browser monitoring function, and wherein the data center
6 selectively accepts said at least one performance metric, based upon a specific kind of performance
7 metric that is being transmitted to it for processing.

8 49. (Original) The system of Claim 42, wherein said at least one performance metric is
9 determined by the processing device without providing any indication to a user of the processing
10 device that said at least one performance metric is being determined.

11 50. (Original) The system of Claim 42, wherein said at least one performance metric
12 includes one or more of:

13 (a) a fetch latency, corresponding to a time period required to fetch a base Web
14 page document over the network;

15 (b) a render latency, corresponding to a time period required to fetch and render all
16 contents of the Web page on the display;

17 (c) a dwell latency, corresponding to a time period exhibited by a user viewing the
18 Web page, before navigating to a different Web page;

19 (d) a per-image fetch latency, corresponding to a time period for fetching a
20 specific image referenced in the Web page;

21 (e) an image arrival time, corresponding to a time at which a specific image,
22 loaded as a part of rendering the Web page, arrives for rendering on the display;

23 (f) a navigation status, corresponding to an event that brought a user to the Web
24 page;

25 (g) a cache status, corresponding to a determination of whether the Web page was
26 cached in the memory by a browser program or by a proxy;

27 (h) a window resize event, corresponding to a determination of whether a user
28 resized a window in which the Web page is rendered on the display;

29 (i) a page stop event, corresponding to a determination of whether a user aborted
30 loading of the Web page;

1 (j) an image error event, corresponding to a determination of whether an error
2 occurred while loading an image included in the Web page; and

3 (k) a JavaScript error event, corresponding to a determination of whether an error
4 occurred during interpretation of JavaScript included in the Web page.

5 51. (Original) The system of Claim 42, wherein the machine instructions further cause the
6 processing device to determine if the Web page was previously cached in the memory by the
7 processing device, before determining said at least one performance metric.

8 52. (Original) The system of Claim 42, wherein said at least one performance metric
9 comprises a performance metric for each image included in the Web page.

10 53. (Original) The system of Claim 42, wherein the machine instructions further cause the
11 processing device to:

12 (a) detect whether a monitor cookie is included with the Web page, said monitor
13 cookie indicating that the Web page is a monitored document; and

14 (b) cause the processing device to determine that said at least one performance
15 metric is to be determined for the Web page in response to the monitor cookie being detected.

16 54. (Original) The system of Claim 44, further comprising:

17 (a) a server computing device that is remote from the processing device and
18 coupled in communication with the processing device and with the data center over a network
19 through the network interface, said server computing device executing a server monitoring function
20 in regard to transferring the Web page to the processing device over the network;

21 (b) said server computing device determining a server performance metric related
22 to the transfer of the Web page to the processing device from the server computing device; and

23 (c) said server computing device transmitting said server performance metric to
24 the data center site for processing.

25 55. (Original) The system of Claim 54, wherein the data center combines a performance
26 metric determined by the browser monitoring function executed by the processing device with the
27 server performance metric determined by the server computing function to determine the correlated
28 performance metric.

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1 56. (Original) The system of Claim 54, further comprising a caching proxy disposed between
2 the server computing device and the processing device, said caching proxy executing a caching proxy
3 monitoring function that determines at least one performance metric related to a performance of the
4 caching proxy.

5 57 – 61. (Previously Canceled)